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STEPHEN LESLIE TYLER	)	
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Appln. No.: 09/323,993	)	
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Filed: June 2, 1999	)	
	:	
For: PRINT ENABLEMENT IN SOFTWARE SYSTEMS	)	August 27, 1999

The Assistant Commissioner for Patents
Washington, D.C. 20231

CLAIM TO PRIORITY

Sir:

Applicant hereby claims priority under the International Convention and all rights to which they are entitled under 35 U.S.C. § 119 based upon the following Australian Priority Application:

PP4071, filed June 12, 1998.

A certified copy of the priority document is enclosed.

Applicant's undersigned attorney may be reached in our Washington, D.C. Office by telephone at (202) 530-1010. All correspondence should be directed to our below-listed address.

Respectfully submitted,

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Appln. No. 09/323,993
S. L. TYLER
Group Art 2722

AUSTRALIA

CERTIFIED COPY OF PRIORITY DOCUMENT

Patent Office
Canberra

I, KIM MARSHALL, MANAGER EXAMINATION SUPPORT AND SALES, hereby certify that the annexed is a true copy of the Provisional specification in connection with Application No PP 4071 for a patent by CANON KABUSHIKI KAISHA filed on 12 June 1998.

COMMONWEALTH OF AUSTRALIA
AUSTRALIA
PATENT OFFICE

WITNESS my hand this Twenty-sixth day of May 1999

KIM MARSHALL
MANAGER EXAMINATION SUPPORT AND SALES

S & F Ref: 409094

ORIGINAL

AUSTRALIA

Patents Act 1990

PROVISIONAL SPECIFICATION FOR THE INVENTION ENTITLED:

Print Enablement in Software Systems

Name and Address
of Applicant: Canon Kabushiki Kaisha, incorporated in Japan, of 30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146, JAPAN

Name of Inventor: Stephen Leslie Tyler

This invention is best described in the following statement:

PRINT ENABLEMENT IN SOFTWARE SYSTEMS

Field of the Invention

The present invention relates to computer-based facility enablement and, in particular, to the availability of computer printing facilities.

Background of the Invention

Seldom in human history have people adopted a communications technology so widely and rapidly as users of the Internet have embraced the World Wide Web.

The Internet provides an ever increasing potential for information interchange, and in order to encourage individuals to take part in this communications revolution, many software providers supply free demonstration versions of their software on-line, sometimes called Free-ware and Share-ware. Individuals may dial-up the home page of a supplier and access the demonstration software for trial purposes. This may even involve down-loading the software onto the personal computer of the individual.

Free-ware and share-ware are attractive forms of software in marketing. However, one drawback in supplying software in this manner is that many never actually subscribe to buy the full version of the software continuing to utilise the demonstration version, which is sometimes powerful in its own right. Many software providers are therefore discouraged to provide demonstration versions of their software on-line.

It is an object of the present invention to substantially overcome, or at least ameliorate, one or more of the problems mentioned above.

Summary of the Invention

In accordance with one aspect of the present invention there is disclosed a method for manipulating an electronic document automatically created by an application program, said method comprising the steps of:

identifying a user involved manipulation of said electronic document to determine if said invoked manipulation is one of a predetermined group of manipulations; wherein if said invoked manipulation is not a member of said group, allowing said invoked manipulation to proceed; or if said invoked manipulation is a

member of said group, allowing aid manipulation to proceed only in respect of a predetermined portion of said electronic document.

Other aspects of the invention will be apparent from the following description.

Brief Description of the Drawings

Fig. 1 is a block diagram of a computer system and network with which the preferred embodiment of the present invention can be practised;

Fig. 2 is a detailed block diagram of two world-wide web site structures;

Fig. 3 is a flow chart depicting operation of a print facility management system of one embodiment; and

Fig. 4 is a flow chart depicting another operation of a print facility management system of one embodiment.

Description of the Preferred Embodiment

In order to access the Internet and traverse the World Wide Web, use is often made of special browsing software such as Microsoft Internet Explorer (Microsoft Corporation) or Netscape Navigator (Netscape Corporation). On entering a web site or some other location, various computer facilities become available to the user in order to manipulate data, programs and the like. Such facilities include the printing of data, copying, running software, listening to audio and receiving video data, amongst others. This may include or result in using Free-ware or Share-ware.

To assist users in being able to track and trace their traversal of the Web, Canon Information Systems Research Australia Pty Ltd has developed a product marketed under the trade mark WebRecord which is currently the subject of United States Patent Application No. 08/903,743 filed 31 July 1997. WebRecord operates in a background mode behind the browsing software to automatically and transparently create a printable document that includes the various Web sites and documents encountered by a user during a traversal of the Web.

The preferred embodiment of the present invention is implemented as an additional feature in WebRecord and has been developed to facilitate the marketing of WebRecord. However, the present invention is not limited to use with WebRecord or

other similar products, but has wider application and may for example be implemented in the browsing software, as will be appreciated by those skilled in the art having read and understood this specification.

The preferred embodiment is practised using a general-purpose computer system 5 connectable to a communication network 38 which provides links 33 to web sites 34 and 36. The computer system 5 includes a computer module 10, input devices such as a keyboard 12 and mouse 13, output devices including a printer 30 and a video display device 32. A modulator-demodulator (modem) transceiver device 44 is used by the computer module 10 for communicating to and from computer systems at other locations via the communications network 38, those computer systems for example include the web sites 34 and 36.

The computer module 10 has a number of components typically including at least one processor unit 14, a memory unit 18, for example formed from semiconductor random access memory (RAM) and read only memory (ROM), input/output (I/O) interfaces including a video interface 40, an I/O interface 42 for the keyboard 12 and mouse 13 and a communications interface 42 for the modem 44. A storage device 22 is provided and typically includes a hard disk drive 24 and a floppy disk drive 26. A CD-ROM drive 20 is typically provided as a non-volatile source of data. The components of the computer module 10, typically communicate via an interconnected bus 28 and in a manner which results in a conventional mode of operation of the computer system known to those in the relevant art. Examples of such computer systems 5 include IBM PC/AT and similar machines, Sun Sparksations and Apple Macintosh. Further, the web-sites 34 and 36 may be implemented on such computer systems.

During an Internet or Web browsing session, a user of the computer system 5 enables operation of the browsing software which is typically stored in the hard disk drive 24 and which facilitates communications via the modem to provide a connection to a web-site.

Locations accessible via the communications network 38 are individually addressable using a Uniform Resource Locater (URL), well known in the art. The URL thus may be entered by the user of the computer system 5 to directly access a particular web-site. Alternatively, web-site documents and the like (including search engines) may include hyper-text which, when selected, provide direct links to locations identified by URL's associated with the hyper-text.

Fig. 2 shows a block diagram representation of two Internet web-sites 34,36 and their associated URL's. The computer module 10 can access the web-sites 34 and 36 via the modem 44 and communications network 38. The web-sites 34,36 can be accessed through both direct and indirect Internet connections, and through a variety of browsers. As seen in Fig. 2, web-site 34 provides access to information locations 46, 48 and 50 each of which has its own unique URL as illustrated. Similarly, web-site 36 access three information locations 52, 54 and 56 also having respective URL's.

It will be appreciated that the information accessed via the various URL's may include any combination of text, images, graphic objects, programs, raw data such as audio data and video data, for example. It is further seen from Fig. 2 that a location 47, accessible via location 46 or location 48 and having a unique URL (URL #9), includes an application program.

In the preferred embodiment, a demonstration version of WebRecord is made available to the public as the application program 47 and for which persons entering Web-site No. 1 have access. The application program 47 may be downloaded to the user's computer system 5 to enable the demonstration of WebRecord to be undertaken.

In the preferred embodiment, users of the demonstration version of WebRecord are free to make use of that program to generate an electronic document suitable for printing on the printer device 30. Typically, the electronic document would incorporate portions sourced from a variety of locations on the Internet and World Wide Web and generated from a single browsing session.

However, in the described embodiments, so as to encourage experimentation and evaluation of the application program, but whilst preventing substantial practical

use of the application program, the user is limited in respect of the printing of the electronic document. For example, the electronic document created by WebRecord is created containing, say, fifteen printable pages, the one embodiment permits the user, on any single printing call, to print only three pages. Accordingly, if the user wishes to print all fifteen pages, the user must perform five separate printing calls in order for the entire document to be printed. In an alternative embodiment, where the electronic document includes material sourced from a number of web locations, as defined by their URL's, printing is limited to only those portions sourced from a predetermined number of URL's.

In this fashion, the user is enabled to view the capacity of the software being trialed and print examples of the document created by the software, but is precluded from convenient use of the software through being limited in application.

Fig. 3 provides a flow chart of how one embodiment operates which illustrates a series of method steps 90 which commences with a start step 92 followed a decision step 94 which examines whether or not a print facility has been selected. If no such facility has been selected, control passes to step 96 which enables performance of the non-print facility, which concludes at step 98. An example of such a non-print facility may be "PrintPreview".

If print facility have been selected, this embodiment implements a step 100 which identifies those specific page numbers of the electronic document selected to be printed. As is usual in most print packages and the like, the user is able to select those particular pages from a multi-page document desired to be printed. In step 100, the preferred embodiment determines that the user has selected to print from page number "a" to page number "b".

Control then passes to step 102 where a test is performed to determine the actual number of pages that have been selected and whether or not they are within the criteria established by the particular embodiment. In this case, page number "b" is subtracted from page number "a" and a test of whether or not that this less than a predetermined number of pages "x" is correct. If this is true, control passes to step 104

where printing from page number "a" to page number "b" inclusive is enabled, this corresponding to the user request.

If the test of 102 is not satisfied, control passes to step 106 where only a predetermined number of pages from page "a" are printed. In this case, step 106 identifies the calculation used to determine the total number of pages printed for an arbitrary value of "x". Control from each of steps 104 and 106 passes to a finishing step 108. In a preferred implementation of this embodiment, the value of "x" is 3.

Fig. 4 illustrates method steps 120 associated with the alternative embodiment mentioned above and which in many respects corresponds to the embodiment of Fig. 3 and in particular corresponding method steps have been given like reference numerals and to which it is noted the corresponding description applies. In the method 120, if print has been selected in step 94, step 122 prompts the user to identify those particular URL's of the multi-URL formatted document desired to be printed. In this embodiment these are identified as URLp and URLq. In step 124, the actual number of URL's to be selected for printing by the user is tested, again against an arbitrary number "x". If the number of URL's is less than or equal to the arbitrary number "x", control is passed to step 126 which prints the URL's selected by the user in step 122. If however the number of URL's exceeds the predetermined value "x", control passes to step 128 where printing is enabled from URLp to URLp+x-1 thereby limiting the total number of URL's to be printed to be the number "x".

With the alternative embodiment of Fig. 4, printing of the electronic document occurs independent of the number of pages that span the document and the number of pages which might be occupied by each URL.

For example, in a preferred implementation of WebRecord, information sourced from a number of URL's may appear on a single page of the printable document. In the alternative embodiment of Fig. 4, only the data sourced from a predetermined number of those URL's (eg. 3) is printed.

The foregoing provides a number of advantages over prior art software trialing systems. For example, many software trialing system enable printing of a product

produced using the software but the printing is in some way obscured for example with the word "demo" printed in the background of the desired image thus detracting from the usefulness of the printed document. By enabling the user to print only a predetermined number of pages or a predetermined number of URL's, the user is able to utilise the trialed software for valuable purposes in order to assess its desirability for purchase. However, by using the print restriction feature of the described embodiment, multiple use of the application software is hampered and thus the user is enticed to obtain a production version of the software.

The foregoing describes only one embodiment of the present invention and modifications, obvious to those skilled in the art can be made thereto without departing from the scope of the present invention.

1. A method for manipulating an electronic document automatically created by an application program, said method comprising the steps of:

identifying a user involved manipulation of said electronic document to determine if said invoked manipulation is one of a predetermined group of manipulations; wherein if said invoked manipulation is not a member of said group, allowing said invoked manipulation to proceed; or if said invoked manipulation is a member of said group, allowing aid manipulation to proceed only in respect of a predetermined portion of said electronic document.

2. A method according to paragraph 1, wherein said predetermined portion comprises a predetermined number of pages of said electronic document.

3. A method according to paragraph 1 or 2, wherein said group includes a printing function.

4. A method according to paragraph 3, wherein said printing function is the only member of said group.

5. A method according to any one of the preceding paragraphs, wherein said electronic document represents a conglomeration of user selected documents obtained via a traversal of a computer network.

6. A method according to paragraph 5, when not dependent on paragraph 2, wherein said predetermined portion comprises a predetermined number of said selected documents.

7. A method according to paragraph 6, wherein associated with each said selected document of said combination is a document location identifier, and said predetermined portion is determined using said document location identifiers.

8. Apparatus for implementing the method of any one of the preceding paragraphs.

9. A computer program product including a computer readable medium incorporating computer program steps configured to implement the method according to any one of paragraphs 1 to 7.

10. A method of manipulating an electronic document substantially as described herein with reference to Fig. 3 or Fig. 4 of the drawings.

Dated 12 June, 1998
Canon Kabushiki Kaisha
Patent Attorneys for the Applicant/Nominated Person
SPRUSON & FERGUSON

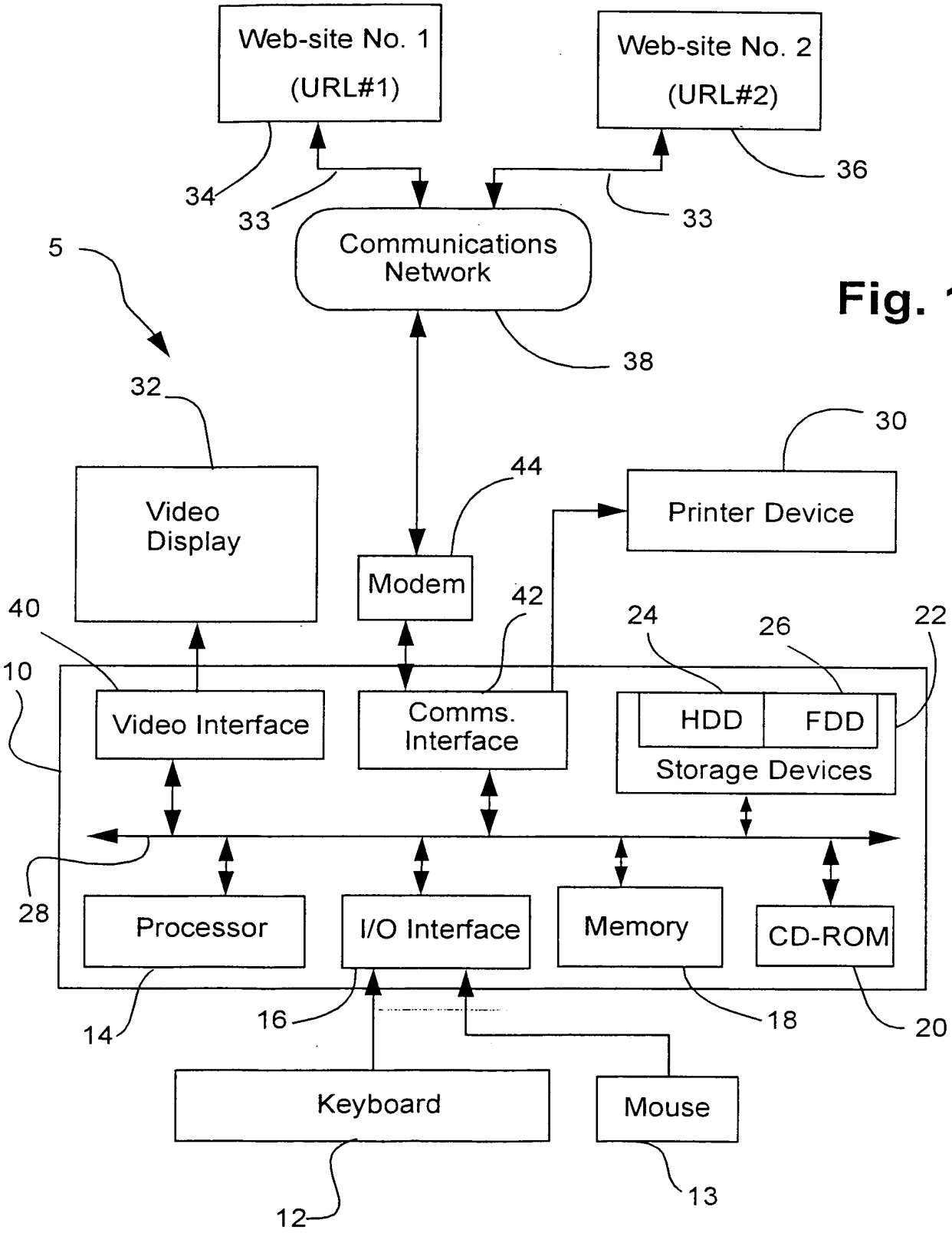
Web-site No. 1
(URL#1)
Web-site No. 2
(URL#2)
34
33
36
33
Communications
Network
5
38
32
30
Video
Display
44
Printer Device
Modem
42
40
24
26
22
10
Video Interface
Comms.
Interface
HDD
FDD
Storage Devices
28
Processor
I/O Interface
Memory
CD-ROM
14
16
18
20
Keyboard
Mouse
12
13

Fig. 1

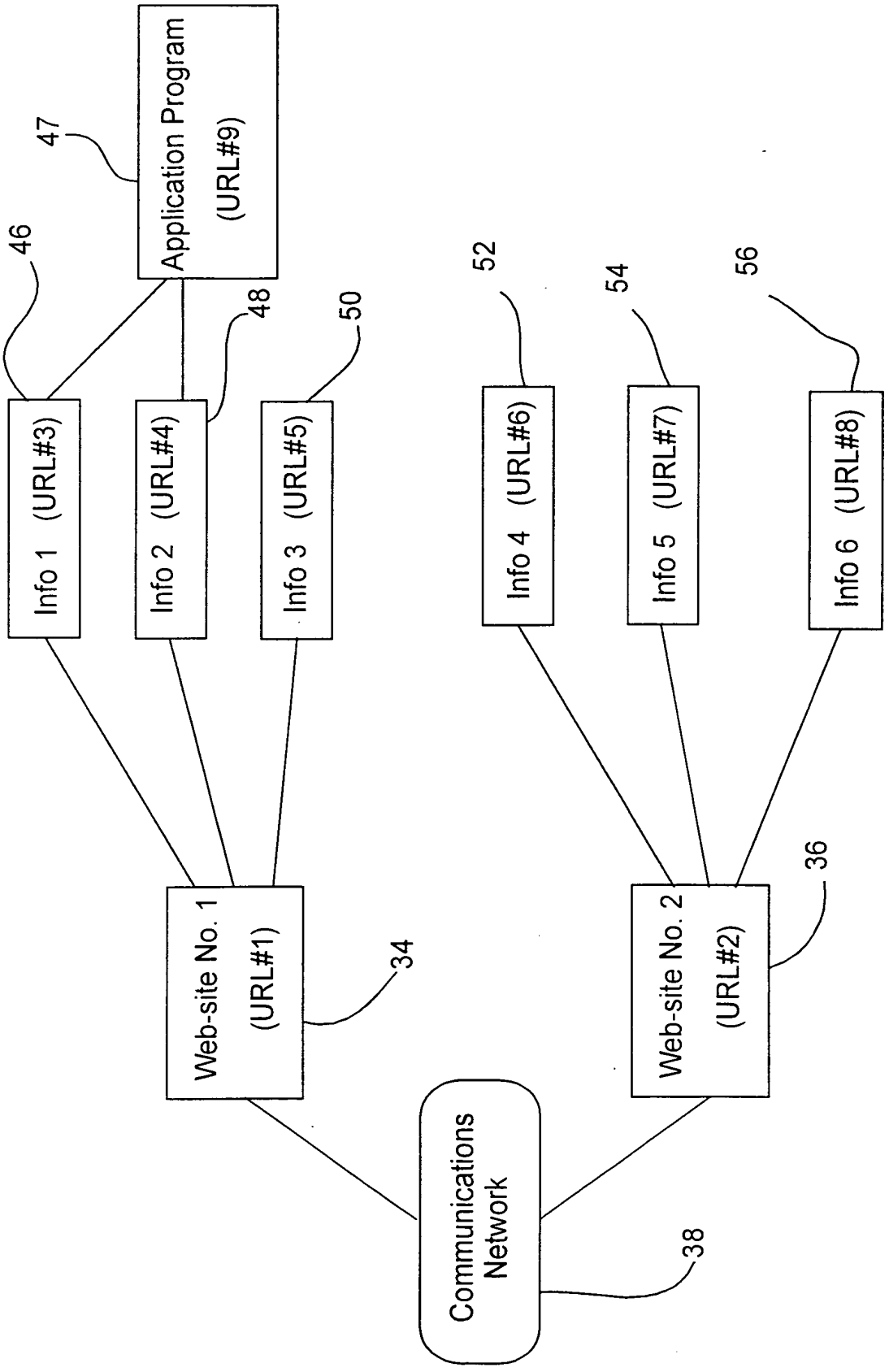
Application Program
(URL#9)
47
46
48
50
52
54
56
Info 1 (URL#3)
Info 2 (URL#4)
Info 3 (URL#5)
Info 4 (URL#6)
Info 5 (URL#7)
Info 6 (URL#8)
Web-site No. 1
(URL#1)
34
Web-site No. 2
(URL#2)
36
Communications
Network
38

Fig. 2

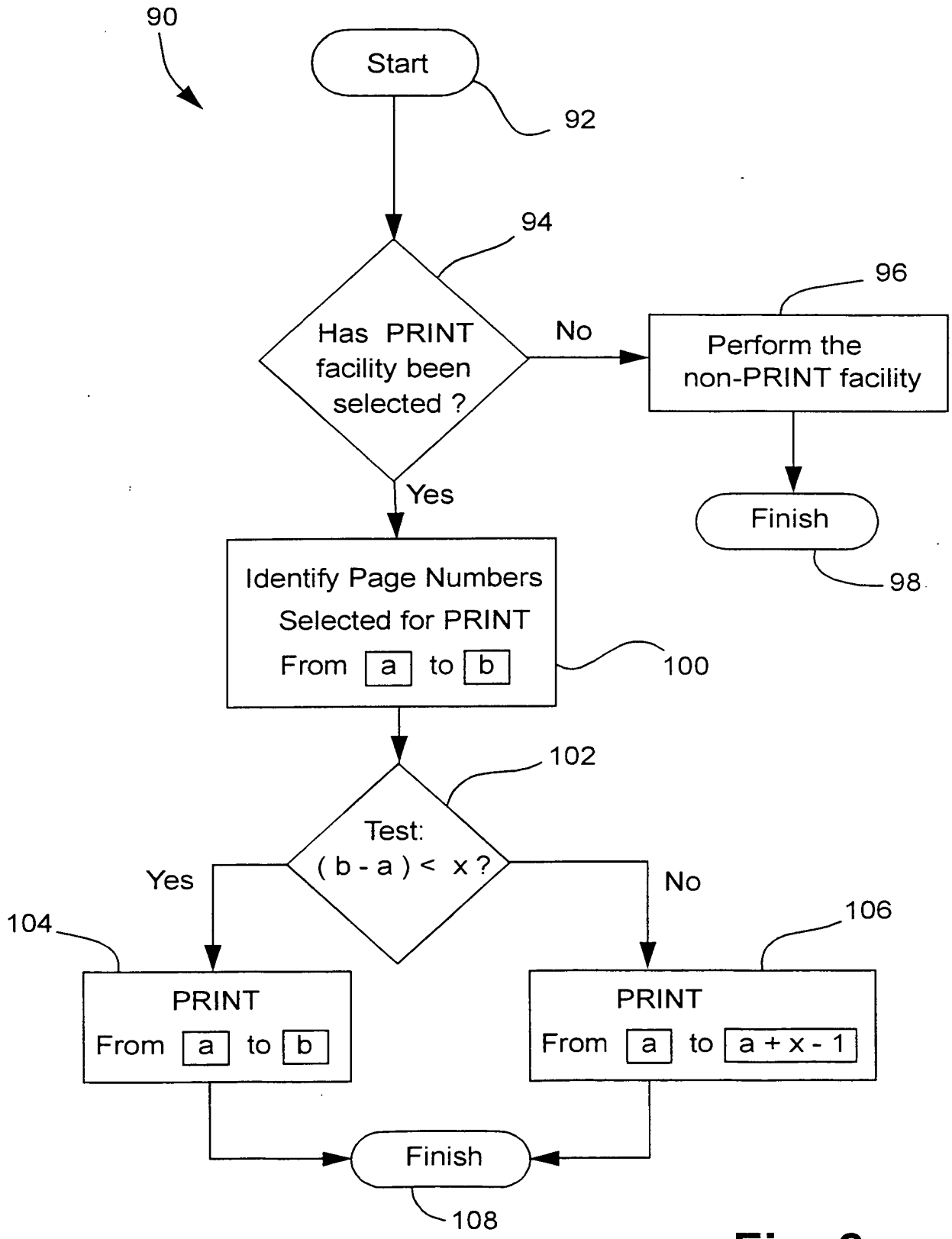
90
Start
92
94
Has PRINT facility been selected ?
No
96
Perform the non-PRINT facility
Finish
98
Yes
Identify Page Numbers Selected for PRINT
From a to b
100
102
Test: (b - a) < x ?
Yes
No
104
PRINT
From a to b
106
PRINT
From a to a + x - 1
Finish
108

Fig. 3

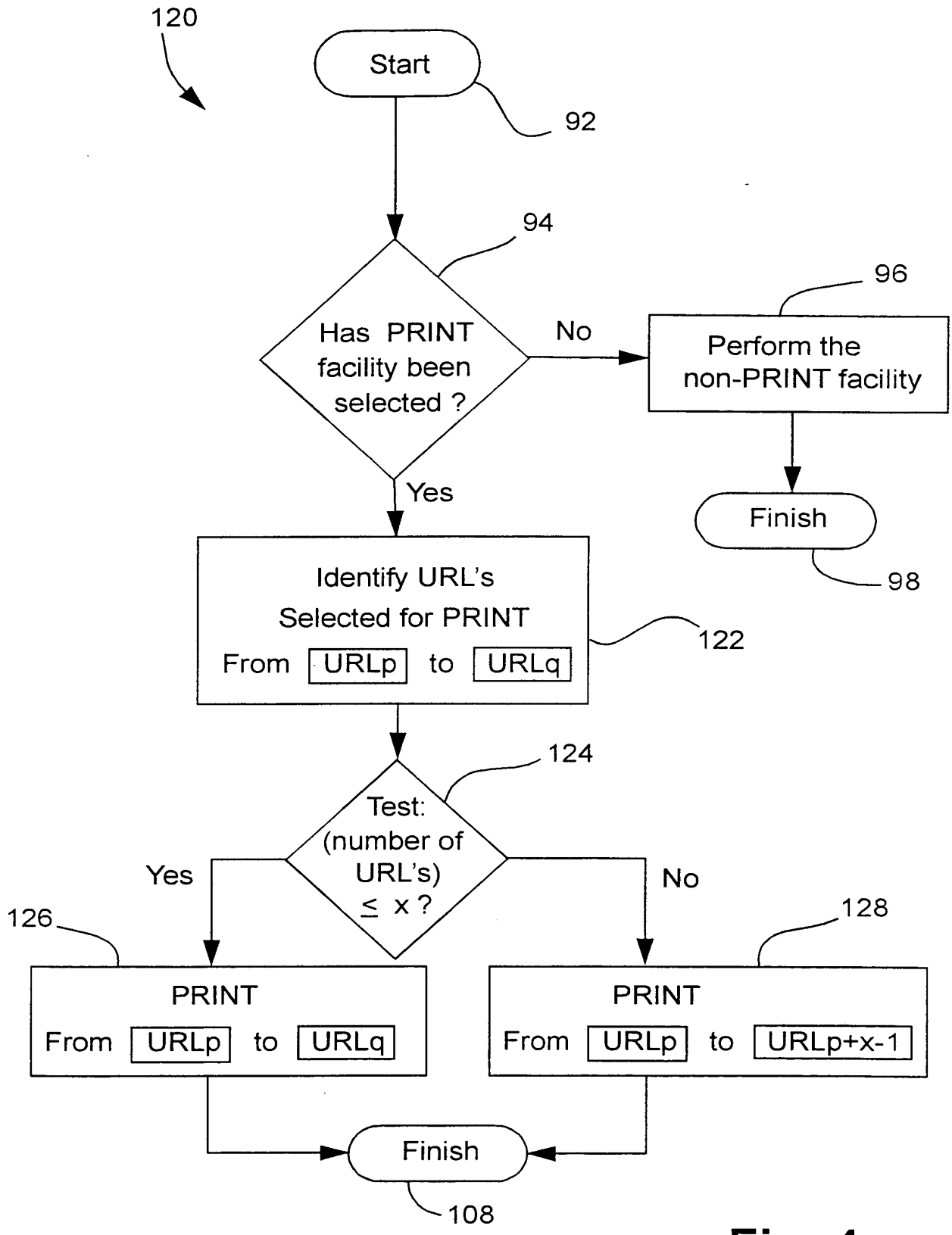
120
Start
92
94
Has PRINT facility been selected ?
No
96
Perform the non-PRINT facility
Finish
98
Yes
Identify URL's Selected for PRINT
From URLp to URLq
122
124
Test: (number of URL's) ≤ x ?
Yes
No
126
128
PRINT
From URLp to URLq
PRINT
From URLp to URLp+x-1
Finish
108

Fig. 4